# **STEM and STEAM Designation Rubric**







Please use the following contact information for any questions you may have regarding this process and/or application:

The Ohio Department of Education: STEM@education.ohio.gov

The Ohio STEM Learning Network: OSLN@battelle.org

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### **About the Rubric**

The Ohio STEM Committee, the Ohio Department of Education and the Ohio STEM Learning Network are committed to ensuring each child in Ohio is challenged, prepared, and empowered through innovative approaches to teaching and learning. STEM and STEAM education provides an opportunity for each child to discover and learn, pursue a fulfilling post-high school path, and become a resilient, lifelong learner who contributes to society.

The Ohio STEM Committee is responsible for determining STEM and STEAM designation. According to Ohio Law, revised Sept. 30, 2021, STEM and STEAM designated schools will remain designated for five years. At the end of that five-year period, the schools are required to reapply to the STEM committee to maintain their designation. Schools' proposals for designation will be reviewed according to The Ohio STEM and STEAM Designation Quality Monitoring Rubric.

Applicants are responsible for timely submission of applications. The submitted applications will be public records within the possession of the Ohio Department of Education. The rubric is aligned with <u>Future Forward Ohio Priorities</u>, <u>Each Child</u>, <u>Our Future – Ohio's Strategic Plan for Education</u>, <u>Ohio's Quality Model for STEM and STEAM Schools</u>, <u>and legal requirements established in Ohio Revised Code Chapter 3326</u>.

The rubric encompasses thirteen attributes - five attributes addressing Culture for Learning, five attributes addressing Learning and Teaching, and three attributes addressing Pathways to Success in Careers.

Schools that receive an "Emerging" rating on any of the rubric components will not yet be recommended for five years of Designation. Certain attributes require a minimum rating of "Executing" and others require either "Establishing" or "Executing" for a school to be recommended for designation. Applicants can see the minimum required rating for each attribute in the respective sections of the rubric in red text.

Schools that reapply after five years of STEM or STEAM designation that are not recommended for additional years of designation upon the completion of this process will collaborate with the Department of Education and the Ohio STEM Learning Network to develop and implement a STEM Growth Plan as established in Ohio Revised Code 3326.03 (E)(2) and 3326.032 (C)(2).

#### Distinct requirements or additional information for STEAM Designation are in bold, italicized, maroon text.

The application requires for artifacts to be submitted to demonstrate evidence of the school's STEM and STEAM pedagogy in practice. Artifacts are defined as forms of evidence that can be used to showcase educational practices that align with STEM and STEAM best practices. Artifacts can take on various formats, including but not limited to documents, webpages, videos, images, flyers, news stories, images or videos of models, prototypes, presentations, spaces, reports, publications, forms, lesson plans, applications, spreadsheets and more. If appropriate, the same artifact can be used as evidence for multiple attributes. The submitted artifacts should be representative of schoolwide, current and exemplary practice of STEM pedagogy. The selection of the artifacts should be purposeful in order to tell a story of ongoing and growing STEM practices accessible to all students within the school. Some of the required artifacts will need to span a certain time period, so please note any required dates in the application. Certain sections of the rubric ask for minimum required specific artifacts in red text, while others may simply offer suggestions.

Helpful tips for the written application platform can be found in grey, italicized text throughout the application.





Rubric Categories			
Emerging	Insubstantial or absent evidence of meeting the requirements aligned with Ohio Law and the Quality Model for STEM and STEAM Schools		
Establishing	Evidence of meeting the requirements aligned with Ohio Law and the Quality Model for STEM and STEAM Schools is limited to clusters of teachers, students, grade levels and disciplines		
Executing	Evidence of meeting the requirements aligned with Ohio Law and the Quality Model for STEM and STEAM Schools spans across all grade levels and disciplines and includes all teachers and students		

#### Proposals for STEM or STEAM School Designation can be submitted by (Ohio Revised Code Section 3326.03):

A partnership of public and private entities consisting of at least all of the following:

- (1) A city, exempted village, or local school district;
- (2) Higher education entities;
- (3) Business organizations.

#### STEM or STEAM School Equivalent Designation (Ohio Revised Code Section 3326.032) applies to:

- (1) A school operated by a joint vocational school district;
- (2) A school offering career-technical education programs that is operated by a school district that is a **comprehensive career-technical education provider**;
- (3) A school offering career-technical education programs that is operated by a **school district that is a participant in a compact career-technical education provider**;
- (4) A community school established under Chapter 3314. of the Revised Code;
- (5) A chartered nonpublic school.

School Equivalents are subject to all parts of this rubric unless otherwise noted.

All corresponding code sections for STEM or STEAM School Equivalents are highlighted gray.



#### Culture for Learning- Beliefs and Disposition, Equity and Access

#### 1.1 Cultural Strategies

#### (Minimum rating required for designation: Executing)

STEM and STEAM schools exhibit age-appropriate, school-wide cultural strategies reflecting innovation, an entrepreneurial spirit, inquiry, and collaboration with individual accountability. ORC 3326.03 (C) (4) 3326.032(B)(3)

	Emerging	Establishing	Executing
Ratings	Community values are not taught or utilized throughout the school.	Community values are sometimes taught and utilized when applicable.	Community values are consistently taught and utilized.
Ratings	The school's cultural strategies do not reflect innovation, an entrepreneurial spirit, inquiry and collaboration with individual accountability.	The school's cultural strategies reflecting innovation, an entrepreneurial spirit, inquiry and collaboration with individual accountability are not exhibited on the schoolwide level.	The school exhibits schoolwide STEM cultural strategies including innovation, an entrepreneurial spirit, inquiry and collaboration with individual accountability.
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### Written Application

**Upload an artifact** depicting the school's community values, for example, something that reflects what is expected in a successful adult. These may be referred to as the school's Habits of Mind or School Pillars. (**Required**)

(The platform setting will prompt the applicant to submit this document.)

Upload **two to four artifacts** that demonstrate how the school models this attribute.

(The platform will allow for the maximum number of artifacts to be submitted, in this case four. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Some examples of artifacts may include, but are not limited to

- Instructional plans that capture how the STEM cultural strategies are embedded in teaching and learning
- Student work samples that demonstrate how students apply the STEM cultural strategies
- Professional development documents (agendas, purpose and objectives, excerpts of content, etc.) that demonstrate the school's focus on incorporating the STEM cultural strategies in its teaching and learning practices

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute, regardless of its format.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)

#### **Culture for Learning- Beliefs and Disposition, Equity and Access**

#### 1.2 Inclusive Mission

#### (Minimum rating required for designation: Executing)

3326.10 (D) Unless the school serves only students identified as gifted under Chapter 3324. of the Revised Code, the school will not limit admission to students on the basis of intellectual ability, measures of achievement or aptitude, or athletic or artistic ability.



3326.10 (E) The school will assert its best effort to attract a diverse student body that reflects the community, and the school will recruit students from disadvantaged and underrepresented groups.

	Emerging	Establishing	Executing
Ratings	The school environment is not inclusive to all students within the school. Student participation in programs is not reflective of the school's overall demographics.  The school does not assert an effort to attract a diverse student body that reflects the community.*  The school admission is limited based on student intellectual, athletics, or artistic ability, or measures of achievement or aptitude.*	The school environment is inclusive to all students. Student participation in programs is reflective of the school's overall demographics, however the available programs are not culturally responsive.  The school asserts an effort to attract a diverse student body that reflects the community.*	The school environment is inclusive and culturally responsive to all students.  The school asserts an effort to attract a diverse student body that reflects the community. The school recruits students from disadvantaged and underrepresented groups from their community.*
	*Does not apply for schools that serve only gifted students under ORC 3324 or schools applying for the STEM school equivalent designation under ORC 3326.032.		
Written Application	STEM or STEAM Schools (not STEM or STEAM School Equivalents): Upload an artifact depicting how demographics of the school compare to the demographics of its district or community. (Required)  (The platform setting will prompt the applicant to submit this document.)  Upload two to four artifacts that demonstrate how the school models this attribute.  (The platform will allow for the maximum number of artifacts to be submitted, in this case four.  After each artifact is submitted, the prompt for the accompanying narrative will follow.)  Some examples of artifacts may include, but are not limited to:  Student participation data in various school programs  Recruitment efforts  Student participation data in STEM or STEAM activities beyond the school day  Student participation data related to career pathways  The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute, regardless of its format.  Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).  (This prompt will follow each submitted artifact.)		

**Culture for Learning- Beliefs and Disposition, Equity and Access** 

# 1.3 Personalized Learning



#### (Minimum rating required for designation: Establishing)

3326.03 (C)(5)(c) 3326.032(B)(4)(c) STEM and STEAM schools provide opportunities for students to engage in personalized learning.

	Emerging	Establishing	Executing
Ratings	Students have no opportunities to have ownership of their own learning.  Mastery learning or competency-based learning is not practiced.	Teachers, rather than students, lead the development and maintaining of personalized student learning goals and monitoring progress.  Mastery learning or competency-based learning is practiced in clusters but not schoolwide.	Students have ownership of their own learning, set goals and make choices about how to accomplish them.  Staff support students in developing and maintaining student-created learning plans and monitoring progress toward future goals.  Personal learning pathways are student-driven, and students have multiple ways to show what they know.  Mastery learning or competency-based learning is practiced schoolwide.
	Unload <b>two to five artifacts</b> that demonstrate l	now the school models this attribute	'

#### Written Application

Upload **two to five artifacts** that demonstrate how the school models this attribute.

(The platform will allow for the maximum number of artifacts to be submitted, in this case five. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Some examples of artifacts may include, but are not limited to:

- School-developed documents related to implementation and support of personalized learning
- Teacher-developed documents related to implementation and support of personalized learning
- Teacher professional development agendas/content
- Descriptions of school interventions to support closing the academic and nonacademic gaps
- Documents depicting high school level career and college advising related to STEM/STEAM fields
- Examples of student voice and choice in learning opportunities
- Student-created learning goal documents
- Documents describing the mastery or competency-based learning school policy
- Teacher-created documents depicting the process for remediation and achievement of mastery

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)

**Culture for Learning- Beliefs and Disposition, Equity and Access** 



### 1.4 School Leadership

#### (Minimum rating required for designation: Establishing)

Evidence that school leadership supports the curriculum principles in ORC 3326.03(C)(5) including rigorous, diverse, integrated, and problem- or project-based curriculum to all students that includes: (5)(a) the role of science technology, engineering and mathematics in promoting innovation and economic progress; (5)(b) the use of design thinking as a school-wide approach; (5)(c) opportunities for students to engage in personalized learning; and (5)(d) the arts and the humanities. 3326.032(B)(5) applies to School Equivalents

P	Emerging	Establishing	Executing
Ratings	School leaders do not recognize the importance of STEM/STEAM in promoting innovation and economic progress.  Leaders assert effort to promote teacher collaboration.	School leaders are open, agile and driven by a vision for learning.  Leaders empower some teachers to facilitate design thinking, problem- or project-based learning, and personalized student learning.  Leaders create school structures that sustain teacher collaboration.	School leaders are open, agile and driven by a vision for learning. That vision recognizes the importance of STEM/STEAM in promoting innovation and economic progress.  Leaders empower all teachers school-wide (including the arts and the humanities) to facilitate design thinking, problem- or project-based learning, and personalized student learning.  Leaders create school structures that sustain interdisciplinary teacher collaboration.
Written Application	Upload two to six artifacts that demonstrate how the school models this attribute. (The platform will allow for the maximum number of artifacts to be submitted, in this case six. After each artifact is submitted, the prompt for the accompanying narrative will follow.)  Some examples of artifacts may include, but are not limited to:  Documents depicting opportunities for staff collaboration during a school day or week, such as a daily or weekly school schedule with clearly delineated common planning time among specific teachers  Agendas for staff meetings (daily, weekly, and/or monthly agendas capturing the collaboration aspects of the meeting) School calendar (monthly, marking period, semester, trimester, year, etc.) that supports staff collaboration Minutes from teacher teams' meetings focused on common planning Documents depicting promotion of STEM understanding among various stakeholders School strategic plan or annual action plan that outlines professional development for teachers, cross-curricular integration or advancing community partnerships.  Lesson plans, work products, modified school schedules or any other documents capturing examples of innovative instruction School schedule depicting opportunities for innovative instruction, such as co-teaching, service learning, learning outside of classrooms, etc. Agendas and/or notes from a professional development or professional meetings depicting the school leaders empowering teachers to engage in innovative instruction		pration aspects of the meeting) staff collaboration eachers, cross-curricular integration or ring examples of innovative instruction service learning, learning outside of

• Agendas and/or notes from a professional development or professional meetings depicting the school leaders employing the design thinking process with their staff

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)

#### **Culture for Learning- Beliefs and Disposition, Equity and Access**

# 1.5 Governing Body and/or Advisory Group and Curriculum Team (Minimum rating required for designation: Executing)

- (B) Proposals may be submitted only by a partnership of public and private entities consisting of at least all of the following:
- (1) A city [school district], exempted village [school district], or local school district; (2) Higher education entities; (3) Business organizations. A community school established under Chapter 3314. of the Revised Code, a chartered nonpublic school, or both may be part of the partnership. 3326.03 (B)

Assurances that the STEM school or group of STEM schools will be under the oversight of a governing body and a description of the members of that governing body and how they will be selected. 3326.03 (C)(2)

Evidence that school leadership supports the curriculum principles of 3326.03 (C)(5).

Subject to approval by its governing body, the curriculum of each science, technology, engineering, and mathematics school and of each community school or chartered nonpublic school that is designated as a STEM school equivalent under section 3326.032 of the Revised Code shall be developed by a team that consists of at least the school's chief administrative officer, a teacher, a representative of the higher education institution that is a collaborating partner in the STEM school or school designated as a STEM school equivalent, and a member of the public with expertise in the application of science, technology, engineering, or mathematics. *In the case of a STEAM school or a STEAM school equivalent, the team also shall include an expert in the integration of arts and design into the STEM fields.* ORC 3326.09 3326.032B6

	Emerging	Establishing	Executing
Ratings	The school does not have a governing body and/or STEM or STEAM advisory group that includes partners from: (1) A city, exempted village, or local school district (not needed for STEM School equivalent) (2) Higher education entities; and (3) Business organizations.  If the school is a STEAM school, the governing body and/or STEM advisory	The governing body and/or STEM advisory group includes partners from: (1) A city, exempted village, or local school district (not needed for STEM School equivalent); (2) Higher education entities; and (3) Business organizations. If the school is a STEAM school, the governing body and/or STEAM advisory group should also include a partner from an arts organization.	The governing body and/or STEM or STEAM advisory group includes partners from: (1) A city, exempted village, or local school district (not needed for STEM School equivalent); (2) Higher education entities; and (3) Business organizations.  If the school is a STEAM school, the governing body and/or STEAM advisory

group does not include a partner from an arts organization.

The governing body and/or STEM or STEAM advisory group may assist in decisions at some point, but does not play an active, consistent role in implementation and growth in STEM/STEAM practices throughout the entirety of the school year.

The governing body and/or STEM or STEAM advisory group does not meet regularly to discuss the progress of the school in STEM/STEAM practices.

A description of the members of the governing body and/or STEM or STEAM advisory group and how they are selected is provided.

group should also include a partner from an arts organization.

The school has a governing body and/or STEM or STEAM advisory group consisting of a diverse group of individuals selected for their expertise in STEM/STEAM pedagogy.

The governing body and/or STEM or STEAM advisory group oversees the operations of the school.

The governing body and/or STEM or STEAM advisory group meets throughout the school year to discuss the progress of the school in STEM/STEAM practices.

A team consisting of at least the school's chief administrative officer, a teacher, a representative of the higher education partner, and a member of the public with expertise in the STEM/STEAM disciplines will engage in curriculum design. This may include guiding the development of standards-based learning goals, ensuring support for implementation of STEM/STEAM instructional practices, impacting the selection of STEM/STEAM learning materials, or supporting the use of dynamic assessments.

In the case of a STEAM school or a STEAM school equivalent, the team also shall include an expert in the integration of arts and design into the STEM fields.

A description of the members of the governing body and/or STEM or STEAM



	advisory group and how they are selected is provided.

# Written Application

**Provide a narrative** describing the school's organizational structure. More specifically, does the school have a separate STEM/STEAM advisory group separate from the Governing Body? Explain the role of the Curriculum Team, as well as the roles of the Governing Body and/or STEM/STEAM advisory group. **(Required)** 

**Upload an artifact** listing the members of the school's governing body and their affiliations. Include a description of how the members are selected. (**Required**)

(The platform setting will prompt the applicant to submit this document. After this artifact is submitted, the prompt for the accompanying narrative will follow.)

If the school has a STEM/STEAM advisory group that is different from the governing body, **please upload an artifact** listing the members and their affiliations. Please be sure to include a description of how the members are selected. **(Required for schools that have a STEM/STEAM advisory group)** 

(After the artifact is submitted, the prompt for the accompanying narrative will follow.)

If the curriculum team is different from the governing body and advisory group, please upload an artifact listing the members and their affiliations. Be sure to include a description of how the members are selected. (Required for the schools that have a curriculum team different than their governing body and advisory group)

(After the artifact is submitted, the prompt for the accompanying narrative will follow.)

**Upload** the agendas and minutes for all governing body meetings, as well as agendas and notes for any STEM/STEAM advisory group OR curriculum team meetings that have occurred within the past 18 months. **(Required)** 

(The platform setting will prompt the applicant to submit this document. Merge all documents into a single PDF before uploading.)

Upload one or two artifacts that demonstrate how the school models this attribute.

(The platform will allow for the maximum number of artifacts to be submitted, in this case two. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Some examples of artifacts may include, but are not limited to:

• Evidence of engagement activities by the governing board, advisory group and/or curriculum team members, such as workshops, classroom engagement, speakers, staff collaboration, PBL contributions, curriculum modifications, etc.

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)



#### **Learning and Teaching**

# 2.1 Integrity of Academic Disciplines (Minimum rating required for designation: Executing)

This section assesses that the school maintains the integrity of each academic discipline and its corresponding grade-level content standards when integrated with other disciplines.

3326.10 (C)(5) 3326.032(B)(4) Evidence that each school will offer a rigorous, diverse, integrated, and problem- or project-based curriculum to all students enrolled in the school, with the goal to prepare all students for post-high school learning experiences, the workforce, and citizenship, and that does all of the following: (a) Emphasizes and supports the role of science, technology, engineering, and mathematics in promoting innovation and economic progress.(d) Includes the arts and humanities. If the proposal is for a STEAM school, it also shall include evidence that the curriculum will integrate arts and design into the study of science, technology, engineering, and mathematics to foster creative thinking, problem-solving, and new approaches to scientific invention.

	Emerging	Establishing	Executing
Ratings	Learning experiences do not require students to apply knowledge from more than one discipline. For STEAM schools: the learning experiences do not integrate the arts and design into the study of science, technology, engineering and mathematics.  Interdisciplinary learning experiences are not content-accurate or are not anchored to the relevant content standards and/or learning experiences are not focused on the big ideas and foundational skills critical to future learning in the discipline(s).	One or more elements below are not occurring schoolwide (they occur in clusters in certain grade levels or certain content areas):  • Learning experiences require students to apply knowledge from two or more disciplines. For STEAM schools: the learning experiences integrate the arts and design into the study of science, technology, engineering and mathematics. • Interdisciplinary learning experiences are content-accurate, anchored to at least one relevant content standard for each discipline represented. • Interdisciplinary learning experiences focus on the big ideas and foundational skills critical to future learning in the disciplines.	All elements below are occurring schoolwide:  • Learning experiences require students to apply knowledge from two or more disciplines. For STEAM schools: the learning experiences integrate the arts and design into the study of science, technology, engineering and mathematics.  • Interdisciplinary learning experiences are content-accurate, anchored to at least one relevant content standard for each discipline represented.  • Interdisciplinary learning experiences focus on the big ideas and foundational skills critical to future learning in the disciplines.



Written

**Application** 

Upload two to four lesson plans (implemented within the past 12 months) of an interdisciplinary learning experience that is anchored to content standards for each discipline represented. (Two lesson plans are required.)

(The platform setting will prompt the applicant to submit this document. After the artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Upload one or two artifacts that demonstrate how your school models this attribute.

(The platform will allow for the maximum number of artifacts to be submitted, in this case two. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Some examples of artifacts may include, but are not limited to:

- Documents capturing interdisciplinary planning of learning opportunities (consider including various subjects and grade levels)
- Documents and/or images depicting integrated curriculum maps
- Documents and/or images depicting vertical alignment and focus on educational and/or industry standards
- Documents and/or images depicting horizontal alignment and focus on educational and/or industry standards
- Student work samples that capture integration of learning across various disciplines (consider including various subjects and grade levels)

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max). (This prompt will follow each submitted artifact.)

#### Learning and Teaching

#### 2.2 Teaching and Learning Approaches (Minimum rating required for designation: Executing)

This section assesses the teaching and learning approaches employed in the school.

3326.10 (C)(5) 3326.032(B)(4) Evidence that each school will offer a rigorous, diverse, integrated, and problem- or project-based curriculum to all students enrolled in the school, with the goal to prepare all students for post-high school learning experiences, the workforce, and citizenship, and that does all of the following: (b) emphasizes the use of design thinking as a schoolwide approach.

	Emerging	Establishing	Executing
Ratings	One or more of the elements below are not taking place at all:	Each of the elements below are occurring but one or more are not occurring schoolwide (they occur in clusters in certain	All elements below are occurring schoolwide:
	<ul> <li>Students learn by doing and regularly engaging in activities that connect learning to real-world</li> </ul>	grade levels or certain content areas):  • Students learn by doing and	<ul> <li>Students learn by doing and engaging in activities that connect learning to real-world issues,</li> </ul>

issues, situations, and problems.

- Students engage in problem-based or project-based learning by experiencing research, problemsolving, project documentation, and participating in presentations of learning to an authentic audience.
- Students engage in the design thinking process.

- engaging in activities that connect learning to real-world issues, situations, and problems.
- Students engage in problem-based or project-based learning by experiencing research, problemsolving, project documentation, and participating in presentations of learning to an authentic audience.
- Students engage in the design thinking process.

situations, and problems.

- Students engage in problem-based or project-based learning by experiencing research, problemsolving, project documentation, and participating in presentations of learning to an authentic audience.
- Students engage in the design thinking process.

#### Written Application

Upload two to four artifacts that demonstrate how the school models this attribute schoolwide.

(The platform will allow for the maximum number of artifacts to be submitted, in this case four. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

Some examples of artifacts may include, but are not limited to:

- A PBL exemplar that communicates the application of design thinking process
- A problem-based learning and/or project-based learning planning document
- Examples of inquiry-based learning in daily instruction
- Examples of learning involving authentic audience

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)

#### **Learning and Teaching**

# 2.3 Computational Thinking and Technology

(Minimum rating required for designation: Establishing)

This section assesses the applications of technology and computational thinking to promote creativity and innovation.

Students engage in diverse curriculum offerings that incorporate relevant technologies (e.g., research, engineering, computer science, design, digital fabrication, etc.). 3326.10 (C)(5) 3326.032(B)(4)

Detings	Emerging	Establishing	Executing
Ratings	Curriculum offerings do not incorporate relevant modern technologies (e.g.,	In some grade levels, curriculum offerings incorporate relevant modern technologies	Schoolwide, curriculum offerings incorporate relevant modern technologies

research, engineering, computer science, digital fabrication, etc.).	(e.g., research, engineering, computer science, digital fabrication, etc.).	(e.g., research, engineering, computer science, digital fabrication, etc.).
Technology is directly substituted for traditional teaching tools or methods.	Students use technology tools identified by teachers to solve problems.	Students identify and use the technology tools they need to solve problems.
	Curriculum offerings incorporate computational thinking in certain clusters or certain grade levels.	Technology is used to engage students in community, state or global learning opportunities that extend beyond the classroom.
		Curriculum offerings incorporate computational thinking for all students.

# Written Application

Upload **two to four artifacts** that demonstrate how the school models this attribute.

(The platform will allow for the maximum number of artifacts to be submitted, in this case two. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Some examples of artifacts may include, but are not limited to:

- Student work samples that capture use of technology to solve problems
- Student work samples that capture how students use technology to engage in opportunities beyond their classroom
- Course catalog depicting courses that incorporate relevant modern technologies

The above listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)

### Learning and Teaching

### 2.4 Dynamic Assessment

(Minimum rating required for designation: Establishing)

	Emerging	Establishing	Executing
Ratings	The school only utilizes traditional assessments.	School provides a variety of ongoing and adaptable assessment techniques to provide data to drive instruction, but not	School provides a variety of ongoing and adaptable assessment techniques to provide data to drive instruction.
	Students are not given opportunities to choose how to demonstrate their learning.	across all subjects and grade levels.	The school utilizes authentic, performance-



		The school utilizes authentic, performance-based assessments, but not across all subjects and grade levels.  Groups of teachers provide specific choices to students on how to demonstrate their learning.	based assessments across all subjects and grade levels.  Schoolwide, students choose how to demonstrate their learning.
Written Application			

#### **Learning and Teaching**

## 2.5 STEM/STEAM Teaching Staff

#### (Minimum rating required for designation: Executing)

(This prompt will follow each submitted artifact.)

Evidence that each school will participate in regular STEM-focused professional development and share knowledge of best practices; ORC 3326.03 (8) and 3326.032(B)(7)

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

	Emerging	Establishing	Executing
Ratings	School's professional development does not focus on the STEM/STEAM instructional practices.	School's professional development focuses on the STEM/STEAM instructional practices but its scope does not include the entire teaching staff.	The entire teaching staff is included in timely, ongoing and relevant professional development opportunities focused on the STEM/STEAM instructional practices.
	The professional development is not timely,		

	ongoing, or relevant.  School staff does not engage in sharing knowledge of best STEM/STEAM instructional practices.	The professional development is timely, ongoing and relevant.  School staff are invited to share their learning of best STEM/STEAM instructional practices with their colleagues from the school.	Teachers and school leadership work together to personalize professional development based on individual development needs.  School staff are invited to share their learning of best STEM/STEAM instructional practices beyond their school.
Written Application	Upload three to five artifacts that demonstrate how the school models this attribute. (The platform will allow for the maximum number of artifacts to be submitted, in this case five. After each artifact is submitted, the prompt for the accompanying narrative will follow.)  Some examples of artifacts may include, but are not limited to:  School's annual PD plan  Agendas/content of STEM/STEAM focused PD  Descriptions of PD providers and how they support implementation of STEM practices  PD participation by teachers  Targeted/individualized PD opportunities  Evidence of a conference presentation  Description of onboarding policies related to STEM/STEAM pedagogy  Job-embedded professional development/instructional coaches  Book studies and staff participation		

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)

Peer observationsVideo coaching

#### **Pathways to Success in Careers**

### 3.1 Career Access and Exploration

#### (Minimum rating required for designation: Executing)

3326.03(C)(9) 3326.032(B)(8) Evidence that each school has established partnerships with institutions of higher education and businesses. *If the proposal is for a STEAM school, it also shall include evidence of established partnerships with one or more arts organizations* 

	Emerging	Establishing	Executing
	The school does not provide age- appropriate opportunities for applied learning in professional STEM/STEAM careers.	The school-provided, age-appropriate opportunities for applied learning in professional STEM/STEAM careers occur in clusters in certain grade levels or certain content areas.	The school provides age-appropriate opportunities for applied learning in professional STEM/STEAM careers to all students.
	The school does not provide age- appropriate opportunities for STEM/STEAM business and industry awareness and exploration.	The school-provided, age-appropriate opportunities for STEM/STEAM business and industry awareness and exploration occur in clusters in certain grade levels or certain content areas.	The school provides age-appropriate opportunities for STEM/STEAM business and industry awareness and exploration to all students.
Ratings		As appropriate for grade level, some students' career interests are developed through active student involvement in STEM/STEAM activities such as explorations (K-8), researching, shadowing and mentorships (6-12), and for high school students only, apprenticeships and	As appropriate for grade level, all students' career interests are developed through active student involvement in STEM/STEAM activities such as researching, shadowing and mentorships and for high school students, apprenticeships and internships.
		internships.	For high school only: Mentorships, apprenticeships, and internships have clear expectations communicated to both students and to partner hosting the student.
			For high schools only: The school provides access for students to complete certifications, credentials and/or credit completion at community colleges, colleges and/or universities.

Written Application **Upload** an artifact depicting the data, including the **percentage** of students, participating in apprenticeships, internships, credentialing, college credit hours, etc., for the last completed school year. **(Required for high schools)** 

#### Upload three to five artifacts that demonstrate how the school models this attribute.

(The platform will allow for the maximum number of artifacts to be submitted, in this case five. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Some examples of artifacts may include, but are not limited to:

- Webpage or a document describing the college and career exploration tool used by the school
- Documents, instructional materials, student products, images, etc., of student explorations of careers (inside or outside the school)
- Documents describing the requirements for mentorship, apprenticeship, internship and/or externship
- Activities focusing on learning about STEM/STEAM careers
- Documents and/or instructional materials connecting the content standards to authentic applications and careers
- Mentorship opportunities (per grade level) and the corresponding student participation data
- Shadowing opportunities (per grade level) and the corresponding student participation data
- Internship opportunities (per grade level) and the corresponding student participation data
- School-facilitated college visits and the corresponding student participation data
- School-facilitated industry visits and the corresponding student participation data
- List of activities (during or outside of school days) related to career explorations (highlighting those related to STEM/STEAM fields)
- List of speakers related to career explorations (highlighting those related to STEM/STEAM fields)
- Description of offered courses or programs related to study skills, college preparation, etc.

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)

#### **Pathways to Success in Careers**

### 3.2 Partnerships Extend Learning Opportunities

#### (Minimum rating required for designation: Executing)

3326.03(C)(9) 3326.032(B)(8) Evidence that each school has established partnerships with institutions of higher education and businesses. *If the proposal is for a STEAM school, it also shall include evidence of established partnerships with one or more arts organizations. The school shall also include assurances that the school has received commitments of sustained and verifiable fiscal and in-kind support from arts organizations (3326.03(C)(10)* 

Ratings Emerging Establishing Execut
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The school's established partnerships do not include institutions of higher education and business.

For STEAM schools: the school has no established partnership with arts organizations.

# Two or more of the elements below are not occurring:

- Partners support instruction by providing ideas for design challenges and problem-based learning.
- Partners share resources with the school, including but not limited to lab/design space, mentors, speakers, equipment, current industry information, expertise, and meeting facilities.
- When age-appropriate, students have opportunities to participate in STEM/STEAM-related competitions, on-site/online STEM/STEAM exhibits, and/or in local, state and national STEM/STEAM forums.
- For high schools only: Partners provide opportunities for workbased learning development, assisting in credential alignment, etc.

The school's established partnerships include institutions of higher education or businesses, but not both.

For STEAM schools: the school has no established partnership with arts organizations.

# One of the elements below is not occurring:

- Partners support instruction by providing ideas for design challenges and problem-based learning.
- Partners share resources with the school, including but not limited to lab/design space, mentors, speakers, equipment, current industry information, expertise, and meeting facilities.
- When age-appropriate, students have opportunities to participate in STEM/STEAM-related competitions, on-site/online STEM/STEAM exhibits, and/or in local, state and national STEM/STEAM forums.
- For high schools only: Partners provide opportunities for workbased learning development, assisting in credential alignment, etc.

The school has established partnerships with institutions of higher education and businesses.

For STEAM schools: the school has established partnership with one or more arts organizations.

#### All of the elements below are occurring:

- Partners support instruction by providing ideas for design challenges and problem-based learning.
- Partners share resources with the school, including but not limited to lab/design space, mentors, speakers, equipment, current industry information, expertise, and meeting facilities.
- When age-appropriate, students have opportunities to participate in STEM/STEAM-related competitions, on-site/online STEM/STEAM exhibits, and/or in local, state and national STEM/STEAM forums.
- For high schools only: Partners provide opportunities for workbased learning development, assisting in credential alignment, etc.



# Written Application

Upload **an artifact** listing the school's established partners. Provide a brief description of their collaboration commitment/role. **(Required)** 

(The platform setting will prompt the applicant to submit this document.)

Upload two to ten current (dated within the last 12 months) letters of support. (Required)

- A minimum of two support letters is required for STEM designation:
  - o One letter of support must be from the school's Higher Education Partner.
  - One letter of support must be from the schools Business/Industry Partner.
- If applying for the STEAM designation, a minimum of three letters of support should be uploaded. The third required letter must be from the school's Arts and Humanities partner.
- All letters should contain: details on how the school has received or will receive in-kind and financial support from regional education partners and business entities, examples of how the in-kind and financial support reflect the community's priorities for STEM/STEAM education, and a description of how this will be used to support innovative STEM/STEAM programming.

(The platform setting will prompt the applicant to submit the required two to three documents)

#### Upload three to five artifacts that demonstrate how the school models this attribute.

(The platform will allow for the maximum number of artifacts to be submitted, in this case five. After each artifact is submitted, the prompt for the accompanying narrative will follow.)

#### Some examples of artifacts may include, but are not limited to:

- Shadowing opportunities (per grade level) and the corresponding student participation data
- Minutes from advisory group meeting related to learning opportunities and/or curriculum development involving the school's partners
- Internship opportunities (per grade level) and the corresponding student participation data
- Documents describing speakers provided by the partners
- Description of resources provided by the partners and their impact on teaching and learning
- Document, presentation or webpage describing a mentorship program supported by the partners
- Opportunities for students to engage in STEM/STEAM related competitions and student participation data
- Opportunities for students to engage in STEM/STEAM related activities (during and outside of school day) supported by the partners and student participation data

The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.

Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).

(This prompt will follow each submitted artifact.)



#### **Pathways to Success in Careers**

# **3.3 Relevant Community Experiences**

### (Minimum rating required for designation: Establishing)

This section assesses how schools root student learning in their local community, including providing opportunities for service learning and solving authentic problems relevant to students and their communities.

	Emerging	Establishing	Executing
Ratings	Students are not provided with STEM/STEAM-focused community learning experiences.  OR  Students are provided with STEM/STEAM-focused community learning experiences that are not relevant to both students and to the community.	STEM/STEAM-focused community learning experiences, relevant to both students and to the community, are available to certain clusters of students, not the entire school.	Schoolwide, students are provided with STEM/STEAM-focused community learning experiences, relevant to both students and to the community.  Students and teachers partner with community members to enhance learning experiences.
Written Application	Upload two to four artifacts that demonstrate how the school models this attribute. (The platform will allow for the maximum number of artifacts to be submitted, in this case four. After each artifact is submitted, the prompt for the accompanying narrative will follow.)  Some examples of artifacts may include, but are not limited to:  • Volunteering opportunities and the corresponding student participation data, including total hours of service learning • Planning notes from school/community meetings identifying authentic problems • Lesson plan that demonstrates a student driven or community driven problem • Work products that show students solutions to a student driven or community driven problem • Webpage, flyers, press releases, news stories or documents related to STEM/STEAM-focused events involving the students and the community members  The above-listed artifacts do not represent an exhaustive list of evidence that can be submitted. Schools are encouraged to select and submit any artifact that demonstrates how the school models this attribute.  Provide a description of how this piece of evidence demonstrates this specific attribute (150 words max).  (This prompt will follow each submitted artifact.)		